

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY


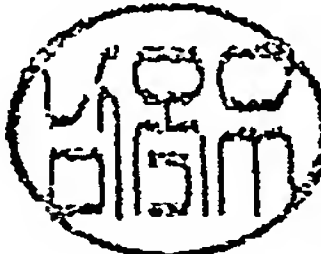
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| REC'D 21 MAR 2006 | |
| WIPO | PCT |

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| Applicant's or agent's file reference P04EA012PCT | FOR FURTHER ACTION See Form PCT/IPEA/416 | |
| International application No. PCT/KR2004/002994 | International filing date(day/month/year) 18 NOVEMBER 2004 (18.11.2004) | Priority date (day/month/year) 19 NOVEMBER 2003 (19.11.2003) |
| International Patent Classification (IPC) or national classification and IPC H04B 7/185(2006.01)i | | |
| Applicant ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE et al | | |

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| <p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of <u>3</u> sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input type="checkbox"/> (sent to the applicant and to the International Bureau) a total of _____ sheets, as follows:</p> <p><input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p> | |
| <p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the report</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p> | |

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|--|---|
| Date of submission of the demand 26 APRIL 2005 (26.04.2005) | Date of completion of this report 03 MARCH 2006 (03.03.2006) |
| Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140 | Authorized officer NAM, Ock Woo Telephone No. 82-42-481-5713  |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/KR2004/002994

Box No. 1 Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

- ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☒ the international application as originally filed/furnished

☐ the description:
 pages _____ as originally filed/furnished
 pages* _____ received by this Authority on _____
 pages* _____ received by this Authority on _____

☐ the claims:
 pages _____ as originally filed/furnished
 pages* _____ as amended (together with any statement) under Article 19
 pages* _____ received by this Authority on _____
 pages* _____ received by this Authority on _____

☐ the drawings:
 pages _____ as originally filed/furnished
 pages* _____ received by this Authority on _____
 pages* _____ received by this Authority on _____

☐ the sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/KR2004/002994

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|-------|-----|
| Novelty (N) | Claims | 1 - 5 | YES |
| | Claims | NONE | NO |
| Inventive step (IS) | Claims | 1 - 5 | YES |
| | Claims | NONE | NO |
| Industrial applicability (IA) | Claims | 1 - 5 | YES |
| | Claims | NONE | NO |

2. Citations and explanations (Rule 70.7)

The present invention discloses an apparatus for controlling a switch of a satellite transponder for multibeam communication, and a method thereof. The apparatus and method can increase output efficiency of communicated satellite electric wave signals and reuse frequencies in one-to-one earth station communication or a one-to-multi earth station communication.

Claims 1-5 are considered to meet the criteria set out in PCT Article 33 (2)-(4) with respect to novelty, inventive step and industrial applicability, because the prior art does not teach nor fairly suggest any of the especially set forth points in the claims.

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PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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|--|---|---|
| Applicant's or agent's file reference P12632-PCT | FOR FURTHER ACTION See Form PCT/IPEA/416 | |
| International application No. PCT/KR2004/002923 | International filing date(day/month/year) 11 NOVEMBER 2004 (11.11.2004) | Priority date (day/month/year) 13 NOVEMBER 2003 (13.11.2003) |
| International Patent Classification (IPC) or national classification and IPC H04B 7/26(2006.01)i | | |
| Applicant SAMSUNG ELECTRONICS CO., LTD. | | |

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 6 sheets, as follows:
 - ☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
 - ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____ containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:
 - ☒ Box No. I Basis of the report
 - ☐ Box No. II Priority
 - ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
 - ☐ Box No. IV Lack of unity of invention
 - ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
 - ☐ Box No. VI Certain documents cited
 - ☐ Box No. VII Certain defects in the international application
 - ☐ Box No. VIII Certain observations on the international application

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|--|--|
| Date of submission of the demand 23 MAY 2005 (23.05.2005) | Date of completion of this report 03 MARCH 2006 (03.03.2006) |
| Name and mailing address of the IPEA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140 | Authorized officer KIM, Sang Woo Telephone No. 82-42-481-8324  |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/KR2004/002923

Box No. I Basis of the report

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This report is based on translations from the original language into the following language _____ which is the language of a translation furnished for the purposes of:
 - ☐ international search (under Rules 12.3 and 23.1(b))
 - ☐ publication of the international application (under Rule 12.4)
 - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the **elements** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
 - ☐ the international application as originally filed/furnished
 - ☒ the description:
 - pages 1 and 3 to 33 _____ as originally filed/furnished
 - pages* 2 _____ received by this Authority on 13.09.2005
 - pages* _____ received by this Authority on _____
 - ☒ the claims:
 - pages _____ as originally filed/furnished
 - pages* _____ as amended (together with any statement) under Article 19
 - pages* 34 to 37-1 _____ received by this Authority on 13.09.2005
 - pages* _____ received by this Authority on _____
 - ☒ the drawings:
 - pages 1/15 to 15/15 _____ as originally filed/furnished
 - pages* _____ received by this Authority on _____
 - pages* _____ received by this Authority on _____
 - ☐ the sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:
 - ☐ the description, pages _____
 - ☐ the claims, Nos. _____
 - ☐ the drawings, sheets _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
 - ☐ the description, pages _____
 - ☐ the claims, Nos. _____
 - ☐ the drawings, sheets _____
 - ☐ the sequence listing (*specify*): _____
 - ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/KR2004/002923

Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

| | | | |
|-------------------------------|--------|------|-----|
| Novelty (N) | Claims | 1-27 | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | 1-27 | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | 1-27 | YES |
| | Claims | | NO |

2. Citations and explanations (Rule 70.7)

A. Novelty and Inventive step

The invention provides a method of managing resources allocated for a HSDPA service in a mobile communication system including an RNC which allocates resources for the HSDPA service and a node B which includes at least one local cell for providing the HSDPA service using the allocated resources among a plurality of local cells.

Specifically, the method comprises the steps of

- (a) determining on, at the Node B, if the local cells support the HSDPA service, and
- (b) transmitting resource status information indicating an availability of the HSDPA service to the RNC according to the determination.

The following documents are made for references:

D1: Load sharing in hierarchical cell structure for high speed downlink packet transmission (17-21 November 2002)

D2: WO 02/102109 A1 (19 December 2002)

D1 shows a load sharing strategy between an umbrella microcell and overlaid picocells for high speed downlink packet transmission.

D2 shows a handover and Fast Cell Selection (FCS) technique in HSDPA.

Though these documents are related to a HSDPA service, neither of these documents nor any combination of these documents teaches or fairly suggests the main characteristic of the present invention;

Managing the HSDPA resource on the basis of the number of local cells and/or the local cell capabilities.

Consequently, claims 1-27 meet the criteria set out in PCT Article 33 (2)-(3).

B. Industrial applicability

The present invention including claims 1-27 suggests a method that can be used in a mobile communication system, thereby meeting the criteria set out in PCT Article 33 (4).

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